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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,194	03/01/2005	Zenhua Wang	CH 020032	6441

24737 7590 04/27/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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EXAMINER

LE, DINH THANH

ART UNIT PAPER NUMBER

2816

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/526,194	<b>Applicant(s)</b> WANG, ZHENHUA	
	<b>Examiner</b> DINH T. LE	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/10/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The recitation “converter”, resistor array” and “capacitor array” in claim 14 lacks antecedent basis in the specification..

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation “converter”, resistor array” and “capacitor array” in claim 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Abstract***

The abstract is objected to because it does not include a single paragraph being contained in a separate sheet as required. Correction is required.

***Claims Objection***

Claims 2-15 are objected to in that, i.e., "of claim 1" on line 1 of claim 2 should be corrected as --as in claim 1--, or "of one" on line 1 of claim 5 should be corrected as --as in any one--. Correction is required.

***Claim Rejections******Claim Rejections - 35 USC § 112***

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

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In claim 1, it is unclear what the “self-calibration means” on line 1 is and how the recitation “ means” and “integrator (30) read on the preferred embodiment or seen on the drawings. The same is true for claim 15.

In claim 5, the recitation “the master control block” lacks clear antecedent basis. It is unclear what the block is and where it comes from.

In claim 10, it is not understood what the “threshold voltage” on line 3 is, where it comes from, how it can be varied and applied to the input of the comparator and how the frequency of the clock signal can be “varied” and where the clock signal comes from. The recitation “DC voltage” on line 7 is confusing because it is unclear if this is additional “voltage” or further recitation of the previously claimed “voltage” in claim 9. It is unclear how the recitation “by varying . . . clock signal” on lines 3-7 is read on the preferred embodiment or seen on the drawings. The same is true for claims 11-13 and for reciting “capacitor/resistor array” and “converter” in claim 14.

In claim 15, the recitation “system” on line 2 is confusing because it is unclear if this is additional “system” or further recitation of the previously claimed “system” in claim 1.

The remaining claims are dependent from the above rejected claims and therefore also considered indefinite.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7, 9 and 14-15 are rejected under 35 USC 102 (b) as being unpatentable over Tamba (US 5,594,383).

Tamba discloses in figures 29-10 an integrated filter circuit comprising:

- a master control unit and a slave unit (10) with at least one slave filter, and
- a master control unit comprising an integrator (21, 22) having circuit elements which

matches those elements of the slave filter that define the slave filter's time constant; a filter (35), a voltage comparator (31) for providing an output frequency signal, and a phase comparator (33) receiving said output frequency and a reference frequency signal from element (32) to provide a control signal (VC) to the said at least one slave filter (10).

With regard to claim 9, the DC voltage is read on the voltage ( $V_{io}$ ) as shown on Figure 10.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 10 and 12-13 are rejected under 35 USC 103 (a) as being unpatentable over Tamba (US 5,594,383) in view of Petersen et al (US 5,325,317).

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Tamba discloses as filter circuit with all of the limitations of the claimed invention as stated above but does not disclose that the tuning control signal is the discrete signal as recited in claim 2 and the threshold voltage (ground) or the DC voltage ( $V_{io}$ ) is varied to tune the filter.

Petersen et al suggests in figure 6 a tuning circuit comprising a counter (72) and a decoder (74) for providing discrete tuning signal to accurately tune the filter.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the counter and the decoder as suggested by Petersen et al in the circuit of Tamba for the purpose of accurately tuning the filter.

A skill realizes that the threshold voltage (ground) at the input of the comparator (31, 32) and the  $V_{io}$  of Tamba can be selected or varied to adjust the output frequency of the filter. Thus, varying the threshold voltage or the voltage  $V_{io}$  for accommodating with a particular environment is considered to be a matter of a design expedient for an engineer and have been obvious at the time of the invention.

### ***Allowable Subject Matter***

Claims 8 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

These claims are allowed because the prior art of record does not suggest "the logic circuit" in claim 8 and "varying an input clock frequency" in claim 11.

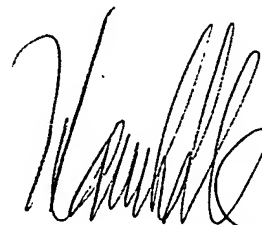
### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**DINH T. LE**  
**PRIMARY EXAMINER**